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DATE: April 28, 2003

TO:  
Name: Assistant Commissioner for Patents

From:  
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FORMAL PAPERS

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Docket No. M 6817 MANCO  
SN: 09/891,568  
Art Unit: 1771

Enclosure:

1) Response - 5 pages

RECEIVED  
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GULPH MILLS 1730

PATENT  
Case M 6817 MANCO

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of  
Sobonya et al.

Serial No. 09/891,568

Examiner: U. C. Ruddock

Filed: June 26, 2001

Art Unit: 1771

TITLE: COMPOSITE SHEET MATERIAL

CERTIFICATE OF MAILING

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April 28, 2003

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Signature of certifier

Mary Lynne Carlisle

Typed or printed name of certifier

RESPONSE

*Handwritten:* APR 29 2003

Assistant Commissioner or Patents  
Washington, DC 20231

Sir:

In response to the Official Action of January 29, 2003, Applicants respectfully request that the rejections be reconsidered in light of the following discussion.

The invention as presently claimed, and as shown in the drawings and as described in the specification, comprises a one piece composite sheet product comprising a scrim embedded in a continuous coating of a foamed resin. The scrim is embedded in the foamed resin; the foamed resin covers the scrim (both sides). The foamed resin is formed as a continuous coating, on both sides of the scrim and there are no apertures which extend from one side of the composite sheet to the opposite side of the composite sheet. The composite sheet structure of the present invention is not a laminate since the scrim is embedded in and covered by the foamed resin. The scrim is an integral part of the sheet structure and does not rely on adhesive bonds to maintain the integrity of the sheet structure.

The composite sheet product of the present invention is simple to manufacture since it requires only that the scrim be impregnated with the foamable resin and the resin

Serial No. 09/891,568  
Art Unit: 1771

foamed. The production of the composite sheet product does not require separately foamed resin and subsequent formation of a laminate. The composite sheet product of the invention can be easily produced with smooth surfaces without need for lamination of a separate sheet of material to a surface of the scrim. The composite sheet product of the invention has the advantage that a structure which does not contain apertures which extend from a first surface to a second surface of the composite sheet can be produced in a single step.

The composite sheet product of the present invention is neither taught nor suggested by the prior art references cited by the Examiner whether they are considered alone or in combination.

Claims 1-5, 7, 9-12, 14 and 15 stand rejected under 35 U.S.C. 103(a) as unpatentable over Hawley (U.S. 5,854,144) in view of Owen (U.S. 5,863,845 and U.S. 5,874,371). Applicants submit that Hawley and Owen whether considered alone or in combination, neither teach nor suggest the present invention.

Hawley discloses a laminated sheet structure rather than a composite sheet structure as in the present invention. The structure comprises a continuous foam bound to one side of a fabric layer which is substantially continuous having no sizable pores. The opposite side of the fabric layer is laminated to a substantially flat and continuous sheet of material by an intermediate layer of adhesive.

The Hawley structure differs from the composite sheet product of the present invention in that the scrim or fabric intermediate is not embedded in the foam so that the foam covers both the top and bottom surfaces of the scrim or fabric intermediate. One surface of the fabric, which is opposite to the surface to which the foam is adhered in the Hawley structure, is laminated to a decorative continuous sheet top layer.

Unlike the present invention, the Hawley structure requires that a continuous sheet be laminated to one surface of the fabric or scrim to form a continuous decorative surface.

The Hawley laminate structure differs from the composite structure of the present invention in that the scrim or fabric layer is not embedded in the foam and that the foam

Serial No. 09/891,568  
Art Unit: 1771

does not cover both surfaces of the scrim. In addition, to obtain a decorative surface, a smooth continuous top layer must be adhesively bonded (laminated) to the surface of the scrim.

The deficiencies in Hawley are not cured by combination with Owen (two patents with the same disclosure). Owen discloses a scrim having relatively large openings with the individual strands of the scrim coated with a non-skid coating. The coating is not continuous in that large apertures extend from one surface of the scrim to the other.

To provide a smooth decorative upper surface, a top sheet is laminated to the upper surface of the non-skid scrim.

The combination of Hawley with Owen would not provide the structure of the composite of sheet of the present invention.

Although, Hawley disclosed a layer of continuous foam, there is neither teaching nor suggest that the scrim be embedded in the resin foam. The resin foam provides the non-skid surface of the Hawley sheet structure. There is no teaching or suggestion to substitute the non-skid Owen scrim for the scrim in Hawley. The Owen scrim provides the non-skid surface. In Owen the foamed plastic provides the non-skid surface. There would be no teaching, suggestion or need to provide two non-skid surfaces, one of which would be an internal portion of the laminate and would never be in contact with the surface covered by the sheet material.

In addition, the structure obtained by a combination of Hawley and Owen would be a laminate and would not provide a scrim embedded in a continuous coating of foamed resin in which the continuous coating of foamed resin covered the top surface and the bottom surface of the scrim.

Applicants respectfully submit that Hawley and Owen whether considered alone or in combination, would neither teach nor suggest the present invention. Applicants submit that the rejection is untenable and respectfully request that the rejection be reconsidered and withdrawn.

Claims 6, 8 13 and 16 stand rejected under 35 U.S.C. 103 (a) as unpatentable over

Serial No. 09/891,568  
Art Unit: 1771

Hawley and Owen in view of McDermott, II et al. (U.S. 5,120,587). Applicants respectfully submit that Hawley, Owen and McDermott, III et al. whether considered alone or in combination neither teach nor suggest the present invention.

Examiner states:

"Hawley and Owen disclose the claimed invention except for the teaching that the foamed resin is a foamed polyvinyl chloride plastisol and the sheet product has a thickness of from about 55 to 100 mils."

Applicants submit that Examiner mischaracterizes the teaching of Hawley and Owen. As discussed above, there is not teaching or suggestion in Hawley and Owen considered alone or in combination to provide a composite comprising a scrim embedded in a continuous coating of a foamed resin as defined in the present application.

Hawley and Owen are directed to laminates which require that a plastic sheet be laminated to the top surface of the scrim or fabric to provide a smooth decorative upper surface. The combination of references neither teaches nor suggests that the top surface of the scrim or fabric be coated with the foamed resin.

Hawley teaches a non-woven fabric having a continuous foam layer on one side and a continuous smooth surface top sheet laminated to the other side of the non-woven fabric. Owen discloses a scrim having a non-continuous, non-skid, non-foamed resin coating individual strands of a woven scrim. The top surface is covered with a laminated decorative top sheet. The combination does not teach nor suggest embedding the scrim in a continuous foamed resin coating which can have a smoother surface and which is non-skid.

The deficiencies in Hawley and Owen are not cured by combination with McDermott, III et al. McDermott, III et al. discloses a carpet underlayment having a scrim coated with a layer of foamed resin in a manner to provide a regular pattern of openings through the underlayment for circulation of air. Both the upper and lower surface of the foamed resin is coated with a pressure sensitive adhesive. The foamed resin can be a foamed polyvinyl chloride plastisol. The foam can be a closed or open foam.

Serial No. 09/891,568  
Art Unit: 1771

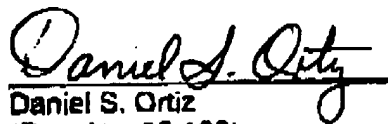
McDermott, III et al. teaches that the polyvinyl chloride foam does not provide a non-skid surface since a pressure sensitive adhesive must be applied to the foam surface to make the underlayment non-skid. Applicants respectfully submit that McDermott, III et al. would not teach or suggest to one skilled in the art to apply a foamed polyvinyl chloride plastisol to the substrate of Hawley or Owen to provide a non-skid surface without the use of pressure sensitive adhesive which is not wanted in the structure. In addition, McDermott, III et al. is completely silent concerning the thickness of the carpet underlayment.

Applicants respectfully submit that McDermott, III et al. does not cure the deficiencies in the teachings of the combination of Hawley and Owen.

Applicants submit that there is neither teaching or suggestion in the combination of Hawley, Owen and McDermot, III et al. of a composite sheet comprising a scrim embedded in a continuous coating of a foamed resin or the desirable properties of such a structure. The structure disclosed in the prior art cited by the Examiner require lamination of smooth sheets to the substrate to provide a smooth upper surface or require a coating of pressure sensitive adhesive to make the structure non-skid.

In view of the above discussion, applicants respectfully request reconsideration and withdrawal of the rejections.

Respectfully submitted,



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